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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/891,032	06/25/2001	Stephen D. Hanna	BLD92000047US1	9462

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EXAMINER	
SORRELL, ERON J	

ART UNIT	PAPER NUMBER
2182	

DATE MAILED: 09/30/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/891,032	HANNA ET AL.	
	Examiner	Art Unit	
	Eron J Sorrell	2182	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☐ Responsive to communication(s) filed on _____.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) 1-28 is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☒ Claim(s) 13 is/are allowed.

6)☒ Claim(s) 1-4,8,9,14-19, and 23-25 is/are rejected.

7)☒ Claim(s) 5-7,10-12,20-22 and 26-28 is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on 25 June 2001 is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless -
>
> (e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

2. Claims 14,16-19, and 23 are rejected under 35 U.S.C. 102(e) as being anticipated by Terashima et al. (U.S. Patent No. 6,538,762).

3. Referring to claim 14, Terashima teaches a system for transmitting a plurality of data types over a plurality of transmission paths comprising:

a memory module configured to store a plurality of compressed and non-compressed data types (see lines 51-57 of column 5; Note the commands comprise three parts a command code and parameter which are not compressed and the data which may or may not be compressed (see lies 1-5 of column 5));

a handshaking control module configured to control the data flow of a distinct stream of data into a data processing module (see lines 33-38 of column 8; note the command analysis section is the handshaking module and directs the data to decompression module); and

a data processing module configured to receive and process the transmitted data in accordance with the type of the transmitted data (see lines 33-38 of column 8; note the decompression module is the data processing module and it decompresses and forwards the data if it is compressed and simply forwards the data if it is not compressed).

4. Referring to claim 16, Terashima teaches the handshaking control module (command analysis section) is further configured to receive data from a host and place the received data into the memory module (see figure 5 and lines 42-57 of column 5).

5. Referring to claim 17, Terashima discloses the handshaking module is configured to place the data received into one of the plurality of FIFO buffers depending on the type of data received (see lines 42-57 of column 10).

6. Referring to claim 18, Terashima discloses the handshaking control module is configured to receive requests for print data from the data processing module (see figure 3) Note item labeled 5 corresponds to the handshaking module).

7. Referring to claim 19, Terashima discloses the handshaking control module is configured to place the data requested from the data processing module on the data bus appropriate for the data type requested (see items labeled 59 and 61 in figure 5).

8. Referring to claim 23, Terashima discloses the data processing module is configured to evaluate header information relating to the print job to determine what types of data to request from the handshaking control module (see lines 1-41 of column 5).

Claim Rejections - 35 USC § 103

9. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the

art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

10. Claim 15 is rejected under 35 U.S.C. 103(a) as being unpatentable over Terashima in view of Kumpf et al. (U.S. Patent No. 6,412,022 hereinafter Kumpf).

11. Referring to claim 15, Terashima fails to teach storing the data in a plurality of First-In First-out (FIFO) buffers.

Kumpf teaches, in an analogous system, storing the data in a plurality of First-In First-out (FIFO) buffers (see items labeled 18 in figure 2).

It would have been obvious to one of ordinary skill in the art at the time of the applicant's invention to modify method of Terashima with the above teachings of Kumpf in order to queue the data if the printers are busy as suggested by Kumpf (see paragraph bridging columns 4 and 5).

12. Claims 24 and 25 are rejected under 35 U.S.C. 103(a) as being unpatentable over Terashima in view of Har et al. (U.S. Patent No. 6,310,563 hereinafter Har).

13. Referring to system claim 24, Terashima fails to disclose the method further comprising reading a word of the data in to a data decompression module every one half-clock cycle.

In an analogous system, Har teaches reading a word of the data into a data decompression module every one-half clock cycle (see lines 41-62 of column 11).

It would have been obvious to one of ordinary skill in the art at the time of the applicant's invention to modify the system of Terashima such that is comprises reading a word of the data in to a data decompression module every one half-clock cycle. One of ordinary skill in the art would have been motivated to make such modification in order to reduce potential bottlenecks in the system as suggested by Har (see lines 41-62 of column 11).

14. Referring to claim 25, Har teaches multiplexing the different types of data and processing each type of data received in accordance with the type (see item labeled 180 figure 1).

It would have been obvious to one of ordinary skill in the art at the time of the applicant's invention to modify the system of Terashima, with the above teaching of Har. One of ordinary skill in the art would have been motivated to make such

modification in order to prevent errors from occurring due to processing data incorrectly.

15. Claims 1-4 are rejected under 35 U.S.C. 103(a) as being unpatentable over Terashima in view of Katsunori (JP 5030366 A) and further in view of Kumpf et al. (U.S. Patent No. 6,412,022 hereinafter Kumpf).

16. Referring to claim 1, Terashima teaches a method comprising:

storing data of a plurality of compressed and non-compressed data types (see lines 51-57 of column 5 and lines 33-38 of column 8; note the data can be compressed or non-compressed);

receiving requests for the stored data (see paragraph bridging columns of 8 and 9);

Terashima fails to teach the limitations of transmitting distinct streams of data of both the compressed and non-compressed data types over each of a plurality of transmission paths and processing the transmitted data in accordance with the type of transmitted data after the transmission of the data.

Katsunori teaches an analogous system wherein transmitting distinct streams of data of both the compressed and non-

compressed data types over a single transmission path (see paragraphs 6,12, and 17 of the translated copy) and processing the transmitted data in accordance with the type of transmitted data after the transmission of the data (see paragraph 14 of the translated copy).

It would have been obvious to one of ordinary skill in the art at the time of the applicant's invention to modify the teachings of Katsunori. One of ordinary skill in the art would have been motivated to make such modification in order to shorten the data transmission time as suggested by Katsunori (see paragraph 4 of the translated copy).

The combination of Terashima and Katsunori fails to teach transmitting both the compressed and non-compressed data over a plurality of paths.

Kumpf teaches an analogous system wherein data is transmitted to a plurality of printers over a plurality of transmission paths (see lines 28-46 of column 2).

It would have been obvious to one of ordinary skill in the art at the time of the applicant's invention to modify the combination of Terashima and Katsunori with the above teachings of Katsunori. One of ordinary skill in the art would have been motivated to make such modification in order to support multiple

communication channels between the peripheral and the controller as suggested by Kumpf (see lines 65-67 of column 1).

17. Referring to claim 2, Kumpf teaches storing the data in a plurality of First-In First-out (FIFO) buffers (see items labeled 18 in figure 2).

It would have been obvious to one of ordinary skill in the art at the time of the applicant's invention to modify method of Terashima with the above teachings of Kumpf in order to queue the data if the printers are busy as suggested by Kumpf (see paragraph bridging columns 4 and 5).

18. Referring to claim 3, Terashima discloses requesting the stored data by introducing an identification pattern into a transmission request, the identification pattern associated with the data type being transmitted at the same time as the data being transmitted (see lines 1-41 of column 5; Note the "command codes" are interpreted as the identification pattern).

19. Referring to claim 4, Terashima discloses transmitting data both of the compressed and non-compressed data types further comprises transmitting the data identification pattern

associated with the data type being transmitted at the same time as the data being transmitted (see lines 42-57 of column 5).

20. Claims 8 and 9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Terashima in view of Katsunori and further in view of Kumpf as applied to claim 1 above and further in view of Har et al. (U.S. Patent No. 6,310,563 hereinafter Har).

21. Referring to claim 8, the combination of Terashima, Katsunori, and Kumpf fails to disclose the method further comprising reading a word of the data in to a data decompression module every one half-clock cycle.

In an analogous method, Har teaches reading a word of the data into a data decompression module every one-half clock cycle (see lines 41-62 of column 11).

It would have been obvious to one of ordinary skill in the art at the time of the applicant's invention to modify the combination of Terashima, Katsunori, and Kumpf such that is comprises reading a word of the data in to a data decompression module every one half-clock cycle. One of ordinary skill in the art would have been motivated to make such modification in order to reduce potential bottlenecks in the system as suggested by Har (see lines 41-62 of column 11).

22. Referring to method claim 9, Har teaches multiplexing the different types of data and processing each type of data received in accordance with the type (see item labeled 180 figure 1).

It would have been obvious to one of ordinary skill in the art at the time of the applicant's invention to modify the combination of Terashima, Katsunori, and Kumpf with the above teaching of Har. One of ordinary skill in the art would have been motivated to make such modification in order to prevent errors from occurring due to processing data incorrectly.

Allowable Subject Matter

23. Claim 13 is allowed.

24. Claims 5-7,10-12,20-22, and 26-28 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Response to Arguments

25. Applicant's arguments with respect to claims 1-12 have been considered but are moot in view of the new ground(s) of rejection.

26. Applicant's arguments regarding claim 14 filed 7/15/04 have been fully considered but they are not persuasive. The applicant argues:

1) The cited prior art fails to teach "transmitting distinct streams of data of both the compressed and non-compressed data types over each of a plurality of transmission paths."

As per argument 1, there is no limitation in claim 14 that requires transmitting distinct streams of data of both the compressed and non-compressed data types over each of a plurality of transmission paths. This limitation is present in claim 1, which has been rejected under new grounds. Terashima does teach all of the limitations of claim 14 (see rejection above).

Conclusion

27. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL.** See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Eron J Sorrell whose telephone number is 703 305-7800. The examiner can normally be reached on Monday-Friday 9:00AM - 5:30PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jeffrey A Gaffin can be reached on 703 308-3301. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Effective October 13, 2004, the examiner can be reached at 571 272-4160 and the examiner's supervisor can be reached at 571 272-4146.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

EJS
September 28, 2004

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